ABSTRACT OF THE DISCLOSURE

A communication node system for an Ethernet-PON includes: an LLID register for storing an LLID being an allocated identifier; a preamble generator for generating a PON preamble; a CRC generator for generating a CRC for the preamble; a transmission connector for combining transport data with the CRC-including preamble to generate a transport frame, and forwarding the transport frame; a reception connector for receiving the frame and dividing the frame into a preamble and received data; a filter for extracting an LLID from the preamble, comparing the extracted LLID with the LLID stored in the register, and selectively filtering the extracted LLID; and a received frame generator for discarding the received data, or combining the received data with the preamble to generate a received frame.